

Additional chart coverage may be found in CATP2, Catalog of Nautical Charts.

SECTOR 2 — CHART INFORMATION

SECTOR 2

THE GULF OF SUEZ

Plan.—This sector describes the Gulf of Suez (Khalij As Suways) from Bahr El-Qulzum to the Gazair Giftun, including Madiq Ciut-al.

The W shore of the Gulf of Suez, from Ras el-Aclabiya to Gazair Giftun is described first. The E shore of the Gulf of Suez, from Ras Misalla to Kas Muhammad, is then described. The arrangement is generally SSE and SE from Bahr El-Qulzum.

General Remarks

2.1 Winds—Weather.—Winds from the N prevail in the Gulf of Suez most of the year. An occasional moderate S gale may occur during the period from December to March. The effect of N and NW wind is generally diminished close to the W shore, particularly in the vicinity of high land.

During strong NW winds in the gulf, it is usually calm during the day S of Jabal Ataqah, on the W side of Bahr El-Qulzum. At El Suweis, the N wind usually freshens late in the afternoon and continues until about midnight.

Tides—Currents.—Almost simultaneously, HW occurs in the gulf between El Suweis and **Kas Gharib** (28°21'N., 33°06'E.). It is HW in the S part of the gulf when it is LW at El Suweis. The tidal currents set N throughout the gulf while the tide is rising at El Suweis, and to the S when it is falling there.

Both currents set mid-channel, with a maximum velocity of 1.5 knots at springs and 0.5 knot at neaps, except in the vicinity of Ras Abu Darag, on the W side of the gulf, about 36 miles S of El Suweis; near Sheratib Shoals, on the E side of the gulf, 88 miles SSE of El Suweis; and off the islands in Madiq Gubal, where the direction is uncertain.

In Madiq Gubal, the current velocity is from 1.5 to 2 knots and sets N longer than S, but in the vicinity of the reefs, they frequently set toward them.

Aspect.—The Gulf of Suez is backed by high land, which in many cases closely approaches the coast and provides conspicuous landmarks. Both shores of the gulf are bordered by coral reefs; those on the E side extend a considerable distance from the shore, while on the W side they are, in general, quite close to the coast. A number of off-lying patches are scattered throughout the Gulf of Suez and in Madiq Gubal.

Regulations.—The IMO has approved a set of special Navigation Regulations in the Gulf of Suez, which is consistent with the volume of traffic transitting the area and special local conditions. The regulations apply to all vessels and are in addition to the International Regulations for Preventing Collisions at Sea. See Pub. 160, Sailing Directions (Planning Guide) South Atlantic Ocean and Indian Ocean for details.

Vessels in the Red Sea, bound for Egyptian ports, should do the following:

1. Request permission to enter Egyptian waters from the Port Authorities 48 hours prior to crossing the 23°N parallel.
2. Send ETA at least 24 hours in advance stating last port of call, position, course and speed.

3. Contact the Port Authorities when within 24 miles of the Egyptian coast for entry instructions.

4. Vessels in the Gulf of Suez should maintain a continuous listening watch on VHF channel 16.

No overtaking is permitted between latitudes 28°00'N and 28°20'N. Overtaking is also prohibited in the vicinity of rigs or oil fields.

The Gulf of Suez Traffic Separation Scheme has been established to separate southbound and northbound traffic. The scheme extends from a position about 5 miles S of Ras el Adabiya to a position E of Shaker Island. The scheme may best be seen on the appropriate charts. This is an IMO-adopted scheme.

Traffic lanes for westbound and southeastbound vessels, approaching and leaving, respectively, the Ain Sukhna Terminal join the main N separation zone and are indicated on the chart of the area.

Anchorage.—There are several convenient anchorages in the Gulf of Suez for small vessels during bad weather. Nearly all are in the vicinity of coral reefs, and great care is necessary when approaching them. When possible, the sun should be kept astern.

During NW winds it is advisable to keep a moderate distance offshore when anchoring because of the possibility of an unexpected shift of wind.

The proper updated charts should be consulted before anchoring.

Caution.—See Pub. 160, Sailing Directions (Planning Guide) South Atlantic Ocean and Indian Ocean for details on areas dangerous due to mines.

Prudence and planning are essential to safely navigate the Gulf of Suez due to the high concentration of shipping using the Suez Canal, and the extensive offshore mineral exploration and exploitation operations in and about the seaway.

Numerous oil rigs and flares exist on both shores of the Gulf of Suez; many of the oil rigs and platforms are marked by lights and, in some cases, by racons. Many of these are temporary and the mariner should not rely on their charted position when navigating.

Caution should be exercised when in the vicinity of oilfields as drill rigs, production platforms, submarine pipelines, and other various hazards, both above and below water, may be present. Entry into certain areas containing oil fields is prohibited.

The Gulf of Suez—West Shore

2.2 Ras el-Adabiya (Ras Adahiya) (29°52'N., 32°30'E.) is the extremity of a low, sandy spit forming the SW entrance point of Bahr El-Qulzum. Ras el-Adabiya is bordered by a shore bank which extends about 1 mile NE, N, and NW. The bank has depths less than 5.5m and the inner part dries.

A prominent stranded wreck lies about 0.3 mile ESE of Ras el-Adabiya. A group of houses stands about 0.5 mile SW of the point.

Between Ras el-Adabiya and Ras Abu Darag, about 29 miles S, the coast recedes W to form a large bay. The S shore of this bay is backed by Gebel El-Galala El-Bahariya, a range extending about 22 miles inland.

Caution.—An extensive foul area, best seen on the chart, extends N and NE of Ras el-Adabiya.

Ras Muhggara (29°49'N., 32°29'E.) is located about 3 miles SW of Ras el-Adabiya. A radio tower stands 1 mile N of the d3xpoint. A light, with a racon, is exhibited about 3 miles SW of the point.

Ras Sadat Terminal (29°46'N., 32°27'E.) is a permanently-moored storage tanker located 1.2 miles ESE of Ras Sadat. A submerged oil pipeline extends W from the tanker to the shore.

2.3 Ain Sukhna (29°35'N., 32°22'E.) ([World Port Index No. 48055](#)) consists of an open roadstead containing four Single Buoy Moorings (SBM) and an anchorage area SE of the cargo berths.

Ain Sukhna is a private port controlled by SUMED and is situated about 29 miles S of Suez. Crude oil is offloaded from ships that are too large to enter the Suez Canal fully loaded. The oil is pumped in pipelines to Sid Kerir.



Ain Sukhna

Winds—Weather.—Winds from the N are prevalent for most of the year, with few dust storms.

Visibility is usually excellent; fogs are infrequent and rainstorms rare. Summers are hot and dry, while winters are relatively cool.

Tides—Currents.—The mean tidal range at the port is 2.3m. The tidal current sets N on the flood and S on the ebb with a maximum drift of 0.5 knot.

Depths—Limitations.—Berth 1 and Berth 2 are located, respectively, about 2 miles ESE and SE of the coast. They can accommodate vessels up to 350,000 dwt, with a maximum draft of 22.8m. With special permission, Berth 2 can accept a vessel up to 400,000 dwt.

Berth 3 can accommodate vessels up to 150,000 dwt, with a maximum draft of 16.7m. However, vessels up to 200,000 dwt may be accepted with prior permission.

Berth 4 can accommodate a vessel up to 500,000 dwt, at a minimum depth of 40.9m.

Charted depths at the berths may be reduced up to 5.2m by installations on the seabed.

The Mooring Master will indicate if conditions are safe enough to pick up the mooring buoy at the berth and will warn the master when conditions warrant stopping the transfer operations, and/or vacating the berth. The mooring buoys are designed to hold tankers in wind up to 35 knots and wave heights up to 3.4m.

Aspect.—Two radio towers, 80m and 130m in elevation, stand 1 mile WNW and NW respectively, of the landing place of the pipelines.

Numerous tanks stand between the radio towers and the coast.

Pilotage.—A Mooring Master will board the vessel within 2 miles SE of SBM Lighted Buoy No. 4.

An ETA should be sent via Alexandria or Port Said coast radio stations immediately on sailing from the loading port. A further message should be sent thereafter if there is a change in ETA exceeding 6 hours, then 72 hours, 48 hours, and 24 hours prior to arrival.

Regulations.—See Pub. 160, Sailing Directions (Planning Guide) South Atlantic Ocean and Indian Ocean for details on regulations pertaining to vessels in Egyptian waters and the Gulf of Suez.

Additionally, see the regulations described in [paragraph 2.1](#). Shore leave is not permitted. Ship's engines should be ready for immediate maneuver.

Signals.—The terminal may be contacted via VHF channels 16, 78, and 79 or by radiotelephone. The International Code of Signals Flag "B" shall be flown by day, and an all-around red light shall be displayed by night, during an oil transfer operations.

Anchorage.—Anchorage is available in the charted anchorage area SE of the mooring buoys, in charted depths of 38 to 54m, over a sandy bottom.

Directions.—Keeping in mind the IMO-adopted regulations for vessels sailing in the Gulf of Suez, vessels should observe the charted Traffic Separation Scheme, using the appropriate caution when joining, crossing, or leaving a traffic lane.

Caution.—Disused cables have been reported to lie in an area between the Traffic Separation Scheme and the port limits and also in the E portion of the anchorage. Vessels are urged to exercise the appropriate caution.

Vessels sailing between 29°25'N and 29°35'N are to coordinate their passage with the tankers proceeding to Ain Sukhna oil terminal.

2.4 Ras Abu Darag (29°23'N., 32°34'E.) lies about 18 miles SE of Ain Sukhna. A light, with a racon, is shown from a white round concrete tower surrounded by white buildings standing close seaward of a ruined lighthouse.

From Ras Abu Darag to Ras Zafarana, about 17 miles SSE, the coast is bordered by coral reefs extending as much as 1 mile offshore. A rocky spit extends about 0.5 mile offshore from a position 2.5 miles SE of Ras Abu Darag; a similar spit extends from a position about 0.5 mile NW of Ras Zatarana. A conspicuous radio mast stands in an approximate position about 3.5 miles SSE of Ras Abu Darag.

Ras Zafarana (29°07'N., 32°40'E.) is reported to give a good radar return up to a distance of 19 miles. The point is marked by a light with a racon.

Vessels should send their ETA 72 hours and 24 hours in advance to the Egyptian General Petroleum Company. The pilot boards in the anchorage in position 28°59.0'N, 32°41.6'E.

Between Ras Zafarana and Ras Gharib, about 51 miles SSE, there are some coastal indentations, but no prominent land features. The coast is backed by an undulating desert plain rising gradually to the bases of mountains, which are about 3 to 20 miles inland.

Gebel Thelemet, in a position about 8 miles SW of Ras Zafarana, has four knobs and is a good landmark. A carin stands on the summit. Some tanks standing close to the shore about 4 miles SE of the summit are conspicuous.

The high tableland of Gebel el Qalala el Qibliya, which extends SW from a position about 16 miles SW of Ras Zafarana, rises at its N end to Gebel Umm Zenetir. The NE extremity is a conspicuous nipple-shaped hill 1,218m high, surmounted by a carin, lying about 7 miles SSE of Gebel Umm Zenetir.

Gebel Umm Tenassib, about 26 miles SSE of Jabal Umm Zenetir, has a sharp, conical peak at its S end.

Using caution, the coast between Marsa Thelemet and **Ras Gharib** (28°21'N., 33°06'E.) can be approached to within 1.5 miles.

Anchorage for small vessels with local knowledge can be taken at several places S of the coastal reef off Ras Zafarana.

2.5 Marsa Thelemet (29°03'N., 32°38'E.) is a narrow bight having a width of about 0.5 mile between the reefs bordering its sides. There is good anchorage in the bight, but caution must be used to avoid the reefs.

Two beacons in range 302° lead into the entrance of Marsa Thelemet. The beacons stand in front of and behind a building at the head of the bight. Should the beacons be indistinguishable, a conspicuous peak at the N end of the hills behind the building, in range with the center of the building, will lead into the entrance on the same bearing.

When inside the reef, vessels should steer N and anchor E of the aforementioned building.

Ras Ruahmi (28°44'N., 32°50'E.), in a position about 22 miles SSE of Marsa Thelemet, has a cove on its S side which is sheltered from N by a reef. The point is marked by a light with a racon.

An oil platform stands in the separation zone, between the traffic lanes, about 8 miles NE of Ras Ruahmi. A second oil platform stands on the W edge of the southbound traffic lane,

about 6 miles ENE of the same position. A submarine pipeline extends from each platform to a point close N of Ras Ruahmi.

Ras Abu Bakr (28°33'N., 32°56'E.), about 12 miles SSE of Ras Ruahmi, is fronted by a reef. A submarine pipeline extends about 20 miles NNE from Ras Abu Bakr to a production platform.

Caution.—An area close N of Ras Abu Bakr is declared dangerous due to mines.

Several oil rigs and flares burning waste oils stand near the coast between a position about 2 miles NNW of Ras Abu Bakr and Ras Gharib.

There are a number of buildings and oil tanks in the vicinity of **False Ras Gharib** (28°29'N., 33°00'E.).

Ras Gharib (28°21'N., 33°06'E.), about 10 miles SE of False Ras Gharib, is a prominent coastal projection near the foot of a whitish-appearing range of low hills.

Gebel Gharib, about 18 miles SW of Ras Gharib, is a solitary precipitous peak that at night can often be seen from the gulf and is a good landmark.

2.6 Ras Gharib (28°21'N., 33°06'E.) ([World Port Index No. 48020](#)), the port lying immediately S of the coastal projection of the same name, comprises an open roadstead off a shore-based petroleum terminal. The terminal has three submarine pipelines extending to offshore berths for loading crude oil in the roadstead. All pipelines are in a charted area where unauthorized vessels are prohibited from navigating or anchoring.

Winds—Weather.—Winds from the N prevail during most of the year, force 3 to 5, with some calms in December and January. Gales from the S that are of short duration, occur on very rare occasions, but cause the anchorage to become untenable.

The N wind causes some swell in the anchorage but is not usually severe enough to interfere with the working of lighters.

Small boats can lay alongside the piers, which are well protected.

A moderate swell around the promontory of Ras Gharib is experienced on most days. Rain hardly ever falls and infrequent sandstorms do not interfere with work in the anchorage.

Tides—Currents.—The mean tidal rise is 0.4m; the spring rise is 0.5m.

Depths—Limitations.—No. 1 Berth (North Berth) will accommodate vessels up to 137m long, with drafts of 7.3m. No. 2 Berth (South Berth) will accommodate vessels up to 182m long with drafts of 9.7m. No. 3 Berth (New South Berth) accommodate vessels up to 299m long, with drafts of 16.8m.

A dangerous wreck and a 9.4m shoal lie, respectively, 0.5 mile SE and 0.5 mile E of North Berth.

Aspect.—Several oil rigs, both onshore and offshore, lie in an area about 3 miles N of Ras Gharib. Ras Gharib Light and the buildings of the terminal are conspicuous.

Pilotage.—Pilotage is compulsory; the pilots may be contacted through the harbor master's office via VHF. Vessels should remain SE of the Prohibited Area until they are boarded.

Regulations.—See Pub. 160, Sailing Directions (Planning Guide) South Atlantic Ocean and Indian Ocean for details on



Ras Gharib

regulations pertaining to vessels in Egyptian waters and the Gulf of Suez.

Signals.—The harbormaster's office may be contacted via VHF.

Anchorage.—The pilot will conduct the vessel to a suitable anchorage if conditions warrant it.

Directions.—Keeping in mind the regulations mentioned above, vessels should observe the Traffic Separation Scheme, exercising the appropriate caution when joining or leaving it.

The terminal proper should be approached from the SE, using caution, as the 20m curve is charted up to 1.5 miles off this section of coast.

Several lights and range beacons used by the pilot to assist in anchoring or berthing are available, but are difficult to identify until close inshore.

Caution.—A Prohibited Anchorage Area, best seen on the Between Ras Gharib and Ras Dib, about 25 miles SE, the coast is low and fringed by reefs. A vessel should not approach the shore closer than 1.5 miles or proceed into depths less than 22m. Along this stretch are a few 12.8 to 18.3m spots about 0.5 mile outside the 20m curve.

The light structure on Ras Shukheir is below the cliff line and is difficult to distinguish. At night the light is surrounded by brighter lights and is difficult to identify.

A Prohibited Anchorage Area, best seen on the chart, extends over almost the whole width of the Gulf of Suez, from

a point about 2 miles S of Ras Gharib to a point about 3 miles S of Ras Shukheir.

Haql Bitrul Ramadan (Ramadan Oil Field), consisting of several production wells, lies about 9.5 miles NNE of Ras Shukheir. Haql Bitrul Yulyu (July Oil Field), lying 4 miles SW of the first field, lies within the Separation Zone, and is connected to the gulf's W shore by a submarine pipeline; a conspicuous flare marks the field. Haql Bitrul Muggan (Morgan Oil Field), contained within a Prohibited Area, lies about 8 miles SE of Haql Bitrul Yulyu and is also marked by a conspicuous flare.

Uncharted oil and drill rigs may be encountered in this area, some of which may be placed temporarily within the Traffic Separation Scheme. Service vessels may be encountered crossing the Traffic Separation Scheme.

2.7 Ras Shukheir (Ras Shukhayr) (28°08'N., 33°17'E.) (World Port Index No. 48015), which is about 15 miles SE of Ras Gharib, consists of two offshore berths devoted to petroleum products, contained within a Restricted Area, and an offshore LPG terminal about 5.5 miles further SE.

Winds—Weather.—For most of the year the prevailing winds are from the NNW. It is strongest from May to August, when it occasionally reaches gale force. The swell raised by these gale winds makes use of the anchorage and the berths difficult.

Depths—Limitations.—Berth 1 can accommodate vessels up to 350m in length with a maximum draft of 19.5m. Berth 2 can accommodate vessels up to 290m in length with a maximum draft of 17.1m.

The LPG terminal, known as Berth 4, can accommodate vessels up to 1,600 dwt, with a maximum length of 100m and a maximum draft of 5.2m.

A small harbor for vessels not more than 70m in length is situated close SE of Ras Shukheir. The harbor, which has two piers, has general depths of about 9m, and is obstructed by a bar with a depth of 5.2m. Large cargo vessels anchor outside the harbor to lighter.

Aspect.—Ras Shukheir rises in gravel cliffs to a height of 77m. A group of brown tanks stands on top of the cliffs. There are numerous oil tanks and other oil installations at the foot of the cliff. The point is marked by a light. A conspicuous flare burns intermittently about 1 mile SSE of the light. A buoyed channel leads to Berth 4.

Pilotage.—A mooring master will meet the vessel about 3 miles SE of Ras Shukheir Light. Berthing is accomplished in daylight only, but vessels must request permission to berth at night. Unberthing takes place day or night.

Regulations.—See Pub. 160, Sailing Directions (Planning Guide) South Atlantic Ocean and Indian Ocean for details on regulations pertaining to vessels in Egyptian waters and the Gulf of Suez.

Vessels are required to send their ETA to the terminal operators at least 72 hours in advance, confirming 24 hours and 12 hours prior to arrival. Six hours prior to arrival, the vessel should confirm its arrival to the terminal via VHF.

The vessel's last confirmation message should contain an estimate of the time required by the vessel to discharge ballast, which is pumped ashore.

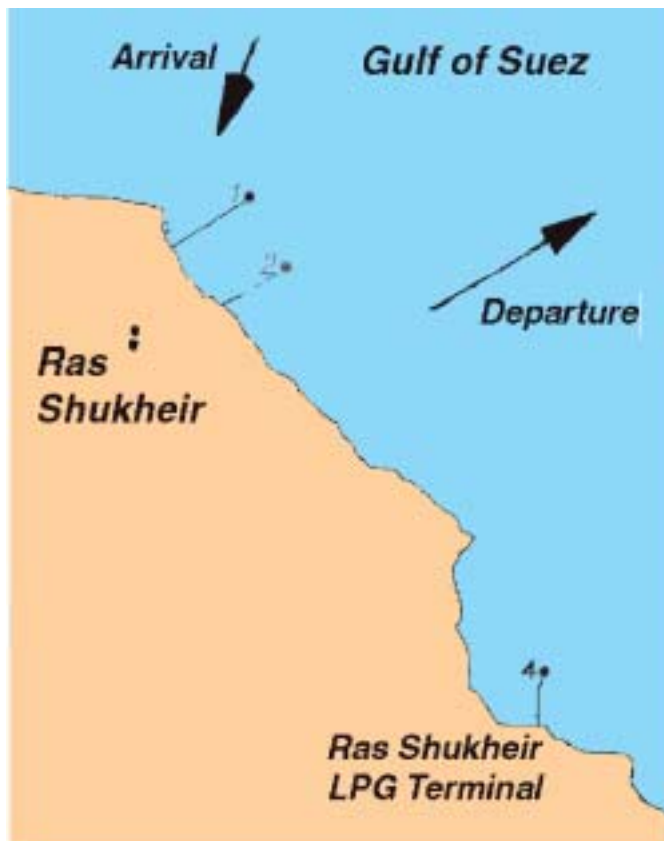
Signals.—The terminal may be contacted via VHF channel 16.

Caution.—Vessels should observe the precautionary area off the port and the limits of the charted oilfields, as may best be seen on the appropriate chart.

Caution is advised as this anchorage lies within the middle of the gulf and exposed to all winds. A wreck, with a depth of 33m, lies just NW of the anchorage. Vessels should take the greatest care in approaching this anchorage and sail for it via the precautionary area off the port.

The terminal operators report that if the vessel is directed to anchor within the vicinity of the oil berths, vessels should never anchor to the N of the berth.

Keeping in mind the IMO-adopted regulations mentioned in [paragraph 2.1](#), observe the Traffic Separation Scheme charted in the gulf. Watch for heavy cross traffic, especially within the Precautionary Area, and remember to remain at least 0.5 mile S of the southbound Separation Line.



Ras Shukheir

2.8 Ras Dib (28°02'N., 33°25'E.), at the N end of Jabal az Zayt, is marked by a light. Several radar conspicuous wrecks lie between 1.5 miles WNW and 4 miles SE of the light.

Between Ras Dib and Umm al Kiman, about 15 miles SSE, the coast is fringed by a reef. Jabal az Zayt (Gebel el-Zeit), which rises from 0.5 to 1 mile inland and appears as islets from a distance, backs the coast along this sector. The summit of this range is about 8 miles SSE of Ras Dib and the S end of the range forms a peninsula.

Ras az Zayt, in a position about 7.5 miles SSE of Ras Dib, projects slightly from the coast. Several submarine pipelines, contained within a Prohibited Anchorage Area, extend across the S portion of the gulf, and are best seen on the chart.

Umm Al Kiman (27°50'N., 33°35'E.) is a low sandy islet on the S part of a coral reef, the E edge of which lies about 0.3 mile offshore; a coast guard station is on the islet. A large flat-roofed building stands on the point W of Umm al Kiman.

Close SW of Umm al Kiman is a bight, with the ruins of several stone buildings near its shores. To the W of the bight is a hill surmounted by a beacon.

From the mainland abreast Umm al Kiman to **Franken Point** (27°14'N., 33°51'E.), about 39 miles SSE, the coast is bordered by reef, outside of which are innumerable islands, shoals, reefs, and channels. To the S of the peninsula at the S end of Jabal az Zayt, the coast is generally low. The peninsula is connected by a reef to Jazirat Ghanim, low and sandy, about 0.6 mile SSE.

2.9 Zeit Bay Terminal (27°51'N., 33°36'E.) ([World Port Index No. 47985](#)) consists of a Single Buoy Mooring (SBM) located about 1 mile ESE of Umm al Kiman. The berth will accept vessels up to 240,000 dwt, with a maximum length of 198m and a maximum allowable draft of 18.5m. Berthing, which may be prevented by winds greater than 25 knots, is accomplished in daylight only, and must be completed by 1600. The SBM is colored yellow and has a light. Vessels should arrive trimmed 2m by the stern.

East Zeit Bay Terminal (27°50'N., 33°36'E.) ([World Port Index No. 47986](#)), about 1 mile NE of Umm Al Kiman, also consists of a Single Buoy Mooring (SBM) able to accept vessels up to 128,000 dwt, but no less than 35,000 dwt. The distance between the vessel's bow and its manifold must be no greater than 137m. The maximum allowable draft 18.3m. Vessels should arrive trimmed 1.2 to 1.8m by the stern. Night berthing is prohibited.

Pilotage is compulsory. Pilots board in the waiting area anchorages. Vessels should send their ETA to the terminal operators at least 72 hours in advance, confirming 24 hours and 12 hours prior to arrival.

For the Zeit Bay Terminal, vessels should contact the facility 4 hours before arrival, call sign "Zeit Bay," on VHF channel 16 and "Marine Control" before approaching the berth. A waiting anchorage is available, and is described below.

For East Zeit Bay Terminal, the vessel should contact the facility 4 hours before arrival, call sign "East Zeit Terminal," on VHF channel 13.

The terminals should also be contacted if proceeding to the waiting anchorage.

A waiting anchorage, common to both terminals, is located in Bughaz az Zayt, and may best be seen on the chart. The anchorage, which is 1 mile in radius, shows charted depths of 20 to 38m, over a bottom charted as coral, holding quality unknown.

The waiting area and anchorage is for oil tankers. LPG tankers anchor in the area shown on the chart immediately S.

2.10 Ghubbat Az Zayt (27°47'N., 33°31'E.), on the SW side of the peninsula, is bordered by a bank extending as far as 0.4 mile offshore in places.



Zeit Bay

From Ras al Bahr, the SW entrance point of Ghubbat az Zayt, a reef extends about 0.8 mile E and 1 mile N.

A spit, with a depth of 2.3 to 5.5m, extends about 1 mile NNW of the latter reef.

The entrance channel leading into Ghubbat az Zayt has a least depth of 7.3m and is about 0.2 mile wide between the reef extending E from Ras al Bahr and the foul ground extending S from the peninsula.

An anchorage area, 0.5 mile in radius, has been established within the bight, centered on the position 27°47.3'N, 33°37.6'E. Pilots for LPG vessels may be obtained at the anchorage, while petroleum carriers may obtain pilotage about 1 mile NNW.

Caution is advised as the approaches to the bight pass through an oilfield, best seen on the chart.

2.11 Ras Jamsah (27°38'N., 33°35'E.) rises in yellowish and white hills to an elevation of 81m, with several buildings charted on it. A small jetty projects from the E side of the peninsula, about 0.75 mile NNW of the peninsula's S end. The peninsula is reported to give a good radar return up to a distance of 22 miles.

Reefs, on which Umm al Heimet and Umm al Heimet Saghira lie, extend about 10 miles SSE from **Geziret Ghanim** (27°46'N., 33°36'E.). A second string of reefs, among which is Shab Jamsah, extends about 5 miles SSE from Ras Jamsah.

A third string of reefs, interspersed with islets and boulders, extends about 7 miles in the same direction from a point W of Ras Jamsah. The channels between these reefs and between the reefs and the islands to the E are quite intricate.

Anchorage.—Jamsah Anchorage, E of Ras Jamsah and N of Shab Jamsah, has depths of 7.3 to 14.6m. It is exposed to N winds, which generally create a nasty sea.

Kibrit Anchorage, about 0.6 mile SE of Ras Jamsah, between Shab Jamsah and Shab Barok, affords good anchorage, in 6.4 to 16.5m. A beacon stands about 0.1 mile within the SE end of Shab Barok.

Gebel Ush (27°30'N., 33°33'E.), a double peak, is located about 2 miles from the coast. It is the highest peak in the coastal range, which terminates in Gebel Abu Shar al Qibli, about 10.5 miles SSE.

Gebel Ushsh is reported to give a good radar return up to a distance of 25 miles.

The Gulf of Suez—Islands and Dangers off the West Shore

2.12 Juzur Ashrafi (Guzur Ashrafi) (27°47'N., 33°42'E.) consists of three reefs, with several islets, 1.8 to 4.5m high, composed of dead coral and sand, on the two W reefs.

The reef to the E consists of three patches, the S one of which is about 2 miles long and covered at LW. The two N patches are narrow and separated by a shallow passage.

A disused light structure, a red iron framework tower, 43m high, stands on the SE end of the northernmost patch. A stranded wreck lies 1 mile NW of the disused light structure. A small pier is near the base of the above tower.

Lighted platforms stand 0.75 mile ENE and 1.5 miles W of the abandoned lighthouse.

A light is reported to be shown from the SE end of about the middle patch. The light structure is reported to give a good radar return up to a distance of 14 miles.

Shab Mukowarat (27°47'N., 33°41'E.), the central reef of Juzur Ashrafi, is about 6 miles in length, with several islets on its N part and **Sandy Islet** (27°43'N., 33°43'E.), 2m high, near its S extremity.

Vessels with local knowledge and a draft not exceeding 3.7m can obtain anchorage in a natural basin in the reefs entered from E, a little more than 1 mile N of Sandy Islet. Within this basin there are depths of about 3.7 to 12.8m, sand.

The height of the water in this locality is considerably affected by the wind. The tidal currents within 2 miles of these reefs are very uncertain in direction.

Qaysum ash Shamaliyah (North Qaysum) (27°42'N., 33°41'E.) is flat with a small hill, 17m high, about 0.3 mile S of its NE extremity.

Quaysum al Janubiyah (South Qaysum) extends S and SW from a position about 1 mile SE of Sandy Islet. The island is low and sandy with a 30m hill at its NE end and an 18m hill about 2 miles farther SW; the former is conical and dark brown while the latter is white and sandy.

The N part of this island has white sandy cliffs. A beacon marks the end of a reef extending E from the E extremity of the island.

Jazirat Jubal, about 3 miles SE of Qaysum al Janubiyah, rises in its NE part to a round summit, 121m high; the E side of the island is steep-to. The island is a good landmark.

Shab Jubal extends about 3 miles NNW from the N end of Jazirat Jubal and is marked on its NW edge by a beacon.

Jazirat at Tawilah (27°35'N., 33°44'E.) is low, flat, and composed of coral. The summit in the E portion of the island is topped by a cairn. Shab Abu Shayban, close SE, covers at HW.

2.13 Gaziret Shakir (Shadwan Island) (Shaker Island) (27°30'N., 34°00'E.) is high and rugged, with the hills, cut up by ravines, having rather steep sides.

From a distance, the island appears flat. Gaziret Shakir is reported to give a good radar return up to a distance of 17 miles. A stranded wreck lies on the island's E shore.

Approaching Gaziret Shakir closer than 1.6 miles by day and 3.2 miles by night is prohibited. This regulation does not apply to shipping using the Traffic Separation Scheme NE of the island.

Anchorage is obtainable off the SW side of Gaziret Shakir, 5.5 miles WNW of Gaziret Shakir Light, with shelter from N winds, in depths of 11m, sand and coral, but this is a prohibited area.

Shab Umm Ush (27°35'N., 33°53'E.) covers at LW. The edges of this reef are clearly visible during daylight and, except for two 3.7m patches lying within 0.5 mile of its W and NW sides, there are no off-lying dangers.

Blind Reef, about 2 miles SSE of Shab Umm Ush, is very narrow, steep-to, and not clearly visible.

Shab el Erq (Shab el Erg) (27°24'N., 33°52'E.), about 9 miles WSW of the SE extremity of Gaziret Shakir, is a crescent-shaped reef, covered at HW. Melana Beacon stands on the N end of Shab el Erq.

Shadwan Channel (27°35'N., 33°50'E.) is entered from N between Jazirat Jubal and Shab Umm Ush, 3 miles SE. It extends 4 miles SSW, then 12 miles SE, and enters the Red Sea between the SE end of Gaziret Shakir and Umm Qamar Island, 9 miles SW.

A small detached reef, about 0.2 mile in diameter and which dries, lies 3.5 miles SSE of the S end of Jazirat Jubal in the fairway of Shadwan Channel. It has been reported that this reef does not exist.

The channel is deep and free from dangers in the fairway, except for the small reef mentioned earlier. As NW winds prevail in this area, vessels of small power may use it with advantage when proceeding N.

Shadwan Channel should be used in daylight only, but many convenient anchorages are available for use by night.

The Gulf of Suez—East Shore

2.14 Ras Misalla (29°49'N., 32°36'E.) is low and sandy. A detached shoal, with a least depth of 5.5m, lies about 1 mile NW of Ras Misalla.

Conry Rock (29°49'N., 32°35'E.), with a least depth of 6.7m, lies about 1.5 miles SW of Ras Misalla. Patches with depths of 6.9m and 9m lie, respectively, 0.5 mile NE and 1.5 miles E of the rock.

The coast between Ras Misalla and Ras Sudr, 14 miles S, is fringed with coral reefs. Vessels are advised to remain outside of the 30m curve if sailing outside of the Separation Lane on this side of the gulf.

Ras Sudr (29°36'N., 32°41'E.) is low, sandy, and bordered by reefs. An 18.3m patch lies about 3.5 miles W of the point, while an airfield marked by masts showing aircraft warning lights is situated on the point.

South Shoal (29°39'N., 32°36'E.), a detached shoal having three heads and a least depth of 10.6m, lies about 5 miles NE of Ras Sudr.

The port of Ras Sudr, the site of an offshore oil terminal, lies about 1.5 miles SE of the point of the same name. There are several oil tanks, buildings, water tanks, and a small pier on the shore of this bight. Two towers stand about 5 miles ESE of Ras Sudr.

Winds from N prevail throughout the year. South winds are most likely to occur in winter and spring, accompanied by heavy squalls.

Anchorage may be obtained in the bay SE of Ras Sudr, 1 mile offshore, in depths of about 13m. The oiling berth consists of a stage, secured to mooring buoys, which is connected to the shore by pipelines for oil and water; there is a depth of 7.9m at the berth.

Gebel Sinn Bishr is a conspicuous, white, cliffy mountain, about 16 miles ENE of Ras Sudr, in a break in the apparently table-topped Gebel el-Tih. The latter is a tract of high, comparatively table-topped land, which terminates in bold steep slopes on this side of the peninsula. It extends to the E for nearly two-thirds of the distance across the Sinai Peninsula, in about latitude 29°10'N.

2.15 Ras Matarma (29°27'N., 32°43'E.) lies about 9 miles SSE of Ras Sudr. The point, which is low and sandy, has a drying reef extending about 0.5 mile S. Much discolored water has been observed near this point.

Two towers, the SE one of which is black and conspicuous, stand on the hilly slopes about 6 miles E of Ras Matarma. A flare is charted 8 miles NE of the point.

Qad Malab, with a least depth of 1.2m, extends about 2 miles from shore between Ras Malab and Ras Lagiya (Ras Lagia), about 4 miles NW.

Ras Malab (29°12'N., 32°55'E.), about 18 miles SSE of Ras Matarma, is low and sandy. The white buildings of a gypsum mining company and a black water tower, 9m high, stand close E of the point and show up well. Gypsum is loaded S of the point. Discolored water has been observed in the vicinity of Ras Malab.

A small pier for use of lighters and local craft is E of the point; there is also a pipeline for loading oil. There are mooring buoys close ESE of the pier.

A pair of beacons, in range 333°, stand close W of the above small pier. A large prominent rock, resembling a sawed-off tree trunk, stands about 1 mile E of the pier.

Vessels should approach this bight with Gebel Hammam Faraun ahead bearing 070°. When the prominent rock mentioned above bears 040°, steer for it on that bearing until the beacons are in range.

Vessels anchor with both anchors down on a SSE heading with their sterns secured to bollards near the root of the pier.

Jebel Thal is sometimes mistaken for Gebel Hammam Faraun. The front beacon of the 333° range is also reported to be inconspicuous.

2.16 Gebel Hammam Faraun (29°11'N., 32°59'E.), about 3 miles SE of Ras Malab and close to the coast, has a precipitous bluff on its W side which is conspicuous from SE.

A cairn stands on the peak. A short distance S is Jabal Thal, a sharp peak.

The range of hills a little N of Gebel Hammam Faraun are white and noticeable, but from there N the mountains are some distance inland with few prominent features.

Between Ras Malab and Ras Abu Zenima, about 13.5 miles SE, the coast is backed by Gebel Hammam Faraun and Jabal Thal in its N part.

Extending SE from these peaks and close to the coast is a series of small mountain ranges, mostly of white chalk.

These gradually decrease in elevation and terminate W of the dark **Jabal Samra** (28°59'N., 33°16'E.).

About 10 miles SE of Ras Malab is the W extremity of a tract of low hills, terminating in a scarp 73m high. This range is so close to the coast that the sea washes its base.

Close S is the mouth of a wadi, marked by dark basaltic rocks, which show up well the surrounding limestone.

2.17 Ras Abu Zenima (29°03'N., 33°06'E.), low and composed of gravel, is backed by a flat sandy plain. It is fringed by reefs, which dry in places, and extends nearly 0.5 mile from shore.

Abu Zanimah (29°02'N., 33°07'E.) ([World Port Index No. 48060](#)), an ore-loading port, is entered between Ras Abu Zenima and Cairn Point, about 2 miles ESE. The bay, sheltered from NW and N winds, has general depths of 18.3 to 25.6m.

The bay is backed by a rugged mass of hills which rise to the mountains farther inland; one of these, about 3 miles E of Ras Abu Zenima, is 309m high, white, square-topped, and conspicuous. Gebel Matalla, 296m high, is detached and stands about 2.5 miles NE of Ras Abu Zenima.

Except during S winds, vessels up to 160m in length and with a maximum draft of 8.2m can lie alongside the head of the ore pier, with its bows to the W, using anchors, lines to the shore, and buoys fore and aft to secure to.

Vessels will usually be met by an official of the mining company, who will advise as to mooring or anchoring.

Vessels entering should keep a conspicuous round hill, 48m high, about 0.2 mile NNW of Cairn Point, bearing 082° until the ore pier bears 018°. Course can then be altered for the anchorage. It has been reported (1993) that a range leads to the pier.

Anchorage.—Good anchorage can be taken, in 21.9 to 25.6m, sand and mud. During strong S winds, the anchorage is untenable and landing is often impracticable.

Caution.—From September to May, S winds make the anchorage untenable.

The coast from a position about 4 miles ESE of Cairn Point is backed by a plain about 4 miles wide and extending about 12 miles S. The hills approach the coast at the S end of this plain, and for about 15 miles farther S the coast is low at distances of 1 mile to 4 miles inland. Light-colored hills rise again, about 11 miles S of Jabal Samra, gradually increasing in height, and join Gebel Ahu Darba, about 27 miles S. A 491m peak, about 3.5 miles NNE of Gebel Abu Darba, is a good landmark.

2.18 Ras Badran (28°57'N., 33°10'E.) is an oil terminal consisting of a Single Buoy Mooring (SBM) contained within

the prohibited anchorage area. The SBM can accommodate a vessel up to 250,000 dwt, with a maximum draft of 18m and a maximum length of 198m.

A shoal patch, with a depth of 12.6m, was reported to lie 1.5 miles SE of the SBM.

A jetty, 120m long and protected by a breakwater, projects from the shore near Ras Badran, and will accept alongside drafts of 6.5m.

Pilotage.—Pilotage is available and may be obtained about 3 miles SSW of the SBM.

Signals.—Vessels should contact the terminal 4 hours prior to arrival on VHF channel 12.

Anchorage.—A waiting anchorage for vessels to berth is to be obtained, in depths of 29 to 51m, good holding ground, within the area indicated on the chart 3.5 miles S of the terminal. Anchorage outside the area is prohibited.

Caution.—Caution should be exercised when approaching the mooring as several oil platforms, connected to the shore by submarine pipelines, lie in the vicinity, within about a 10 mile radius of Ras Badran.

A prohibited anchorage area, best seen on the chart, encloses several offshore structures in the vicinity of Ras Badran.

At **Ras Abu Rudeis** (28°54'N., 33°10'E.), about 3 miles S of Ras Badran, are some conspicuous oil tanks and an airfield.

2.19 Marsa Wadi Firan (Marsa Wadi Feran) (28°45'N., 33°13'E.) ([World Port Index No. 48065](#)) is a petroleum-loading terminal, consisting of three submarine pipeline berths, lying about 9 miles S of Ras Abu Rudeis.

Depths—Limitations.—There are three offshore berths for tankers connected with the shore by submarine pipelines. Vessels are berthed with their anchors down and secured to mooring buoys. Two spar buoys are moored close NW of No. 1 Berth and No. 2 Berth.

No. 1 Berth can accommodate tankers of 105,000 dwt, with a maximum length of 274m and a maximum draft of 16.1m.

No. 2 Berth can accommodate tankers of 50,000 dwt, with a maximum length of 244m and a maximum draft of 12.2m.

No. 3 Berth can accommodate tankers of 18,000 dwt, with a maximum length of 190m and a maximum draft of 5.2m.

Aspect.—Several conspicuous oil tanks stand on shore. An opening in the light-colored hills shows up well against the dark ranges further inland.

Pilotage.—Pilots board about 1 mile SW of No. 1 Berth.

Regulations.—See Pub. 160 Sailing Directions (Planning Guide) South Atlantic Ocean and Indian Ocean for regulations pertaining to vessels in Egyptian waters. Mooring and unmooring are permitted in daylight only.

Signals.—Vessels should radio their ETA 72 hours and 24 hours prior to arrival to "PETMISR CAIRO 2049 UN," and "COP UN 2449." Vessels should contact "ABU RUDEIS" on VHF channel 16 or 6 when within range. The pilots may be contacted on VHF channels 6, 8, and 16.

Anchorage.—Anchorage is available about 2 miles W of SW of the terminal, in depths of 31m, sand.

Directions.—Vessels should approach the berths from W, with the tanks bearing not more than 090°, to avoid the shoal water N of the port.

Ras Sharatib (28°40'N., 33°12'E.) is reported to be low and sandy.

From the W side of the gulf, the massive summit of **Jabal Sirbal** (28°39'N., 33°39'E.) and Jabal Umm Shawmar, about 23 miles farther SE, may be seen above the hills near the coast.

Caution.—A prohibited area, containing shoal water and oil rigs which present a hazard to navigation, lies about 5 miles SW of Ras Sharatib and is best seen on the chart.

A prohibited anchorage area extending W and S of the prohibited area contains submarine pipelines and is also best seen on the chart.

2.20 El Belayim (28°34'N., 33°15'E.), a lagoon entered through a 0.9m channel lying about 8 miles SSE of Ras Sharatib, has a maximum depth of 14m in its center. Tidal currents run strongly through the entrance.

Gebel Abu Darba, close SE of the entrance to El Belayim, has a 449m high rounded summit. Two conspicuous white patches lie near the shore, about 3 miles SE of Gebel Abu Darba; four oil tanks stand on the coast about 2 miles further SE.

Both Gebel Abu Darba and Gebel Abu Huswa, a 677m peak lying 6 miles SE, appear as islands from a distance.

The coast from abreast Gebel Abu Darba is backed by a coastal range for a distance of about 23 miles in a SE direction. This range lies close-to and parallel with the shore and terminates in Jabal Hamman Saiyda Musa (Gebel Hammam Saidna Musa).

Jabal Musa (Mount Sinai), 2,285m high, about 36 miles E of Gebel Abu Daba, is generally obscured by other mountains, except from a position near **Ras Malab** (29°12'N., 32°55'E.).

Caution.—Many banks and shoal patches lie off this section of coast, some of which lie within the northbound Traffic Separation Lane. All vessels, especially deep-draft vessels, should use the appropriate caution when transiting the fairway from a point about 24 miles S of Marsa Wadi Firan to Madiq Jubal.

2.21 El-Tor Bank (At-Tur Bank) (28°15'N., 33°23'E.), extending in a SE direction from a position centered about 10 miles NE of **Ras Shukheir** (28°08'N., 33°17'E.), has a least charted depth of 7.3m.

A 12.8m patch and a 20.5m patch lie within the Precautionary Area off Ras Shukheir.

Moresby Shoals (28°10'N., 33°27'E.), with a least depth of 5.5m, lies SE of El-Tor Bank.

Felix Jones Patches (28°04'N., 33°36'E.), with a least reported depth of 8m, lie about 10 miles SE of Moresby Shoals.

Caution.—Several oil fields, oil platforms, and other associated structures and dangers are located within a restricted area and a prohibited anchorage area, which encompass most of the dangers listed above. Both areas are best seen on the appropriate chart.

2.22 El Tur Harbor (28°14'N., 33°37'E.), a small fishing and pilgrimage port with an inner and outer harbor, is partially sheltered on its W and SW sides.

A conspicuous white mosque stands at the head of the harbor. A conspicuous 24m HW tower stands on the SE side of the port.

Leading beacons, in range 095°, stand near the shore SE of the boat harbor. These beacons are not visible until almost in range, when they appear in a gap in the trees. Lights, vertically disposed, are shown from these beacons during the pilgrimage season or by request.

Bey Beacon, 11m high, stands on the center of Irq Riyah. A stranded wreck, on a S heading, lies close SW of Bey Beacon. This wreck, which has the appearance of a vessel at anchor, obscures the beacon to vessels approaching from W.

Anchorage.—The harbor does not have enough room for large vessels, and often during the pilgrimage season it is overcrowded with small vessels.

There is anchorage within the harbor, in 10.9m, mud and sand, with Grafton Beacon, located at the end of a reef extending S from the W entrance point of the harbor, bearing 230°, about 0.2 mile.

Anchorage can also be taken, in about 18.3m, good holding ground, about 0.2 mile S of Grafton Beacon. This anchorage is exposed to NW winds.

The boat harbor is sheltered from all but S winds.

Directions.—Vessels entering by the N channel, which leads N of Irq Riyah in a least depth of 10.9m, should steer on the 095° range to a point about 0.1 mile S of Grafton Beacon. Then haul to the N, keeping the beacon about 0.1 mile distant until E of it, and then proceed to the anchorage. It should be borne in mind that the depths within the harbor shoal abruptly.

Vessels entering by the channel E of Irq Riyah, which has a least depth of 20.1m in the fairway, must rely on Bey Beacon and the coastal reef, as Irq Riyah is barely discernible. Grafton Beacon should be steered for on a bearing of 348°, until about 0.1 mile S, then proceed as directed above.

Caution.—There are several patches, with depths of 10.9 to 18.3m, lying within 4.5 miles W through S of the inner harbor.

Irq Riyah, sheltering the harbor from the SW, is a drying coral reef. Depths less than 9.1m extend about 0.5 mile N and 0.5 mile S, respectively, from the center of the reef.

This reef neither breaks nor shows discoloration, and it should be approached with caution. A 5.5m patch and a 5.8m patch lie about 0.5 mile SSW and 0.5 mile SW, respectively, of the boat harbor.

2.23 The coast between El Tur and Ras Muhammad, at the S end of the Sinai Peninsula (Shibh Gazirat Sina), is backed by a sandy plain, which rises gradually to a height of about 305m at the base of the mountains about 12 miles inland. This plain also extends NW for a considerable distance between the coastal range and the mountains inland.

Qurayn Atut (28°09'N., 33°52'E.), a dark sugarloaf peak about 479m high, lies about 14 miles ESE of El Tur and is a good landmark. Jabal Mazraiyah, with a rugged top about 16.5 miles farther SE, is another conspicuous landmark.

This latter peak, when seen from W, has the appearance of an outcrop of rock with three small peaks about midway between the coast and the inland mountain range.

Shaykh Riyah (28°09'N., 33°40'E.), in a position about 5 miles SSE of El Tur, affords sheltered anchorage, in 9.1 to 12.8m, sand. The W side of this inlet is formed by a low sandy

point, which projects S from the coast for about 0.4 mile, and is fringed on its W and S sides by reef.

A detached shoal, with a least depth of 3.9m, lies about 0.5 mile SE of the extremity of the above sandy point. The passage between the detached shoal and the coastal reef E is about 0.3 mile wide, with a least depth of 14.3m.

Caution.—A 7.3m patch lies about 3 miles SW of Shaykh Riyah; it lies near the N end of a bank with depths of 9.1 to 18.3m. Between Shaykh Riyah and Ras Kanisah, about 17.5 miles SE, drying reefs and other submerged dangers extend up to 2.5 miles from the coast.

Oil production platforms, best seen on the chart, are also located off the coast.

2.24 Between the low and sandy **Ras Kanisah** (27°56'N., 33°53'E.) and Ras Muhammad, about 24 miles SE, the coast is bordered by coral reefs which extend, in some cases, about 5.5 miles offshore.

The depths in the vicinity of the dangers are very abrupt and soundings give very little warning of the proximity of reefs.

During daylight, the change in the color of the water from deep blue to bright green is quite apparent.

Poynder Shoal (27°55'N., 33°44'E.), with a depth of 5.5m, lies about 8 miles W of Ras Kanisah.

Caution.—A prohibited anchorage area extends over the whole of the gulf off this section of the coast, and is best seen on the chart.

Marsat Al Qadi Yihya (27°55'N., 33°54'E.), entered between Ras Kanisah and Ras al Millan, about 4 miles SE, has several shoals in its entrance. It is sheltered on its W side by a reef extending about 1 mile ESE from Ras Kanisah and on its SE side by Shab ad Daqiyiq.

Shab Rayyis, awash at LW, consists of two patches connected by shoal water and lies in the entrance of this bay. The best channel into the bay lies N of Shab Rayyis.

The passage E of Shab Rayyis has several 1.8 to 3.6m patches in it, which render it intricate to traverse.

Mersa Zaraba (27°50'N., 34°00'E.), about 3.5 miles SE of Ras al Millan, is a bight in the coastal reef. The entrance of this bight, with a least depth of 10.9m, lies between two detached

5.5m patches off the SE end of Shab Al Megeeda and a reef about 0.4 mile farther E.

Shab Ali (27°50'N., 33°50'E.), the outermost danger off this part of the coast and separated from the coast by Inner Channel, consists of numerous coral reefs and shoals.

Azov Patch, with a depth of less than 1.8m, lies near the NE end of Shab Ali, in a position about 2 miles SW of Ras Kanisah.

Shag Rock (27°46'N., 33°53'E.), the southernmost rock of this group, is 1m high. A line of breakers has been reported to extend S of the rocks. A stranded wreck lies close NW of Shag Rock. During thick weather vessels should pass Shab Ali at a safe distance, as depths of about 36m lie within 2.5 miles to the W.

A stranded wreck lies on the W edge of Shab Ali, about 6 miles NW of Shag Rock. This wreck was reported to be quite conspicuous, with its hull and stack plainly visible, and was said to be easily mistaken for a vessel underway.

A dangerous wreck lies in the S entrance of Inner Channel, about 3.5 miles NNE of Shag Rock.

Inner Channel (27°50'N., 33°53'E.) is about 1.5 miles wide and may be safely used by day.

A bank, with depths of 12.8 to 18.3m, extends across the channel between Shab Ali and Shab ad Daqiyiq.

Vessels approaching from the N should take care to avoid Poynder Shoal; a good lookout should be kept for detached rocks, especially in the vicinity of Azov Patch.

An oil field, consisting of several production platforms and a conspicuous flare, lies on the E side of Shab Ali and may best be seen on the chart.

Several lighted beacons have been established in Inner Channel, including Shag Rock and Ras Kanisah. The platforms are also lighted.

Anchorage is prohibited in the Inner Channel, but temporary anchorage can be taken off the S end of Shab Ali, near Shag Rock, in 27 to 37m.

2.25 Madiq Gubal (Strait of Jubal) (27°40'N., 34°00'E.) forms the junction between the Gulf of Suez and the Red Sea. It is about 6 miles wide at its narrowest part and is bordered by innumerable shoals and reefs.